



Township of Dawn-Euphemia

Shetland Conservation Area Master Plan



Table of Contents
Shetland Conservation Area
Master Plan

1.0	Background and Features	1
1.1	Conservation Areas: History	3
1.2	Population Changes and Projections	3
2.0	Strengths, Concerns/Weaknesses and Opportunities	4
2.1	Strengths	4
2.2	Concerns/Weaknesses	4
2.3	Opportunities	5
3.0	Purpose	5
4.0	Goal and Objectives	5
5.0	Value of Shetland Conservation Area	6
6.0	Conservation Area Zoning	6
7.0	Liability and Risk Management	6
7.1	Wildlife	7
7.2	Insects	7
8.0	Master Plan Concept	8
8.1	Recommendations	8
9.0	Infrastructure Cost Estimates	10
10.0	Implementation (Phasing) Plan	11
11.0	Potential Funding Sources	11
12.0	Conclusions	12

Maps

Shetland: Map 1: Shetland Conservation Area- Proposed Improvements

1.0 Background and Features



An aerial view of Shetland Conservation Area

The Shetland Conservation Area is a tract of land located east of the Hamlet of Shetland on the north side of Bentpath Line in the former Euphemia Township. It comprises a fourteen acre park that is bisected by the Sydenham River. It is popular with campers who admire and appreciate the scenery and the quietness of the region.

It was purchased in 1936 by a non-profit corporation, known as the Shetland Picnic Corporation. In 1963 the property was donated to the Sydenham Valley Conservation Authority on the condition that the lands would be maintained in perpetuity as a conservation area for the benefit of both the community and the area as a whole. The St. Clair Region Conservation Authority subsequently assumed ownership and by 1991, shared responsibility for the maintenance of the conservation area with the former Township of Euphemia. Today, the Township of Dawn-Euphemia and the St. Clair Region Conservation Authority continue to share the development and maintenance responsibilities.

The areas of the Sydenham Conservation Area adjacent to the Sydenham River are zoned as Environmental Protection-Hazard. These lands are located within

the Sydenham River floodplain and are subject to the One Zone Concept as defined by the Regulatory Flood Standard as determined by the St. Clair Region Conservation Authority.

Buildings and structures in the flood plain are prohibited except for:

- those necessary for flood or erosion control
- those necessary for conservation purposes
- minor buildings such as rain shelters
- those structures that comprise a portion of a recreation pathway

New development within the floodplain must be in conformity with the Township's Official Plan and the policies of the St. Clair Region Conservation Authority.

One of the main features of the Shetland Conservation Area is the Sydenham River which runs directly through it. The river is an important ecological feature for this region as it helps drain much of Lambton County as well as several small areas of Middlesex County and northern Chatham-Kent. The east Sydenham river is the larger (drainage area of 1450 km²) branch and its substrate is a mixture of bedrock, clay, silt, sand and gravel. This mixture of material, when combined with low gradient has created unique stream habitats. It is these habitats that make the Sydenham River an environmental and ecological treasure as it supports a variety of aquatic life comprising at least eighty-two species of fish and thirty-four species of freshwater mussels. These species are thriving in this watershed. In fact, some of these species are found nowhere else in the world. Twenty-three species of fish, mussels, and reptiles which live in and around the river have been identified nationally and/or provincially as species at risk. The aquatic species at risk in the Sydenham River include the following:

Mussels:

Northern Riffleshell-Endangered
Wavy-Rayed Lampmussel-Endangered
Rayed Bean-Endangered
Snuffbox-Endangered
Mudpuppy Mussel-Endangered
Kidneyshell-Endangered
Rainbow Mussel-Endangered
Eastern Pondmussel-Endangered
Mapleleaf Mussel-Threatened
Round Hickorynut-Endangered
Round Pigtoe-Endangered
Fawnsfoot-Endangered

Fish:

Northern Madtom-Endangered
Eastern Sand Darter-Endangered
Blackstripe Topminnow-Special Concern
Pugnose Minnow-Special Concern
Grass Pickerel-Special Concern
Bigmouth Buffalo-Special Concern

Reptiles:

Eastern Foxsnake-Endangered
Eastern Spiny Softshell Turtle-Threatened
Blanding's Turtle- Threatened
Snapping Turtle- Special Concern
Northern Map Turtle- Special Concern

Within the Shetland Conservation Area, a number of trees have been identified as species at risk. One example is the kentucky coffee tree which is one of the nineteen rare species of trees that exist throughout the Conservation Area. Examples of other tree species include the hackberry, black walnut, bitternut hickory and black maple.

1.1 Conservation Areas: History

Conservation Areas were created with the passing of the Conservation Authorities Act in 1946. The act was passed as a response to the concerns expressed that much of the renewable natural resources of the province were in an unhealthy state as a result of poor land, water and forestry practices throughout the 1930's and 1940's. The combination of drought with massive deforestation led to soil loss and flooding. Conservation areas use lands for specific resource management purposes such as flood control, floodplain management, forestry and natural area preservation. Ontario's thirty-six conservation authorities collectively own and operate over four hundred conservation areas comprising a total area of 58,400 hectares, which makes them one of the largest property owners in Ontario. Conservation areas play an important environmental, educational and recreational role in Ontario and contribute to the physical and mental well being of the more than 4.5 million Ontarians who visit them each year.

1.2 Population Changes and Projections

According to the report released by the County of Lambton entitled "Population Summary Trends & Projections: 2006 to 2031" Dawn-Euphemia is projected to experience a population loss of at least 20% (449 people) by 2031. The projected trend will result in the Township's population declining from 2,200 to 1,751

persons. The report states that the reason for the drop of population is due to the present age distribution (aging demographics) and the overall loss of population in the young adult age group. The report suggests that by retaining only a fraction of this age group, even just by halving their projected losses may have a greater effect than tripling the growth rate in other age groups.

What does this mean for the Shetland Conservation Area?

Studies have shown that there is an increased interest in low impact, recreational and physical activities such as walking, bird watching, outdoor education and ecotourism. As the population base ages and the young adult age group declines, demand for low impact recreational and physical activities will rise. The Shetland Conservation Area can be an attractive destination for these activities.

2.0 Strengths, Concerns/Weaknesses and Opportunities

This section will outline the strengths, concerns and opportunities associated with the Shetland Conservation Area.

2.1 Strengths:

The Shetland Conservation Area is a modest site having an area of fourteen acres. The existing relationship with the St. Clair Region Conservation Authority ensures that Shetland will always be a recognized conservation area under the umbrella of the conservation authority. This guarantees that the Shetland Conservation Area will have a high level of authenticity and legitimacies as an official conservation area. The Shetland Conservation Area is also known as an established camping area with a high level of solitude which is appreciated by all occasional and seasonal campers. Finally, since the Shetland Conservation Area is within both the Sydenham River ecosystem and the Carolinian ecological zone it offers all visitors an opportunity to learn about the rare and unique species that live throughout the area.

2.2 Concerns/Weaknesses:

There are a number of concerns/weaknesses associated with the Shetland Conservation Area. The current infrastructure is in need of improvement and some infrastructure is lacking. There is no functioning canteen, washroom facilities are not appropriate for a seasonal campground (temporary toilet), and the conservation area offers only a moderate amount of serviced campsites and a small playground unit. A notable concern is that the conservation area lacks interpretive displays that would provide education opportunities for visitors to learn about the wildlife, rare trees and the aquatic life at risk in the Sydenham River ecosystem.

2.3 Opportunities:

Since there are a number of concerns/weaknesses, there are many opportunities to make improvements to enhance the Shetland Conservation Authority. The ability to modernize and improve existing infrastructure and to build new infrastructure while strengthening the relationship between the Township and St. Clair Region Conservation Authority are at the heart of this plan and present excellent opportunities for the Shetland Conversation Area.

3.0 Purpose

The purpose of this master plan is to provide a document that will help guide the Township of Dawn-Euphemia and the St. Clair Region Conservation Authority in the management, enhancement and development of the Shetland Conservation Area. This plan offers initiatives that seek to improve park infrastructure, attract new visitors and campers, and provide an avenue to develop a greater sense of appreciation for the environment.

4.0 Goal and Objectives

4.1 Goal

The goal is to enhance and manage the Shetland Conservation Area in a manner that will provide the public with both quality passive and active outdoor recreational opportunities.

4.2 Objectives

To help realize the above noted goal, the following objectives have been adopted:

- i) To provide passive outdoor recreational and nature appreciation opportunities in concert with site conservation and education;
- ii) To undertake infrastructure improvements designed to enhance the area;
- iii) To provide a functional area that will encourage activity by canoeists, campers and nature walkers; and
- iv) To protect and conserve the natural heritage features for their inherent value.

5.0 Value of the Shetland Conservation Area

Preserving the environmental value of the Conservation Area is crucial to the overall health and welfare of this region. The Shetland Conservation Area is a well known camping destination for camping enthusiasts. This master plan provides recommendations designed to further enhance the infrastructure and natural heritage features of the area.

6.0 Conservation Area Zoning

The purpose of conservation area zoning is to ensure that the lands are properly planned, developed, and managed. Zoning assigns uses to lands within the conservation area based on their significance for protection or potential use for active and passive recreation.

Two zones have been identified for the Shetland Conservation Authority by the St. Clair Region Conservation Authority as follows:

- Natural Zone
- Development Zone

The Natural Zone is a physical and biological unit in as near a natural (undisturbed) condition as possible. Those wooded areas along the west side of that part of the park located on the south side of the Sydenham River and on the north side of the river are designated as a natural zone (see Map 1) It is intended that these areas remain unaltered by any form of development or man made change.

The Development Zone makes up the majority of the Sydenham Conservation Area. This zone includes the picnic areas, portable toilets, the main path, parking areas, canteen, campsites and the picnic shelter. Any development or improved infrastructure changes will be encouraged to take place within this zone.

7.0 Liability and Risk Management

Conservation Areas are areas where people can enjoy recreational and social activities. However, all visitors of a conservation area need to understand certain rules and regulations that go along with the area. All visitors need to remain safe and below are some suggestions to manage the risk that comes with interacting with wildlife, nature and insects populations all while protecting rare environmental qualities and resources of the conservation area.

7.1 Wildlife:

When visiting the Shetland Conservation Area, visitors need to be reminded of the variety of wildlife that will live within the Conservation Area. Common mammals such as the eastern chipmunk, eastern cottontail, grey squirrel, raccoons, and white-tailed deer may be observed within or passing through the conservation grounds. Amphibians and reptiles such as the green frog, leopard frog, American toad, and eastern garter snake also live in or near the woodlands of the conservation area. The woodland core and edges provide habitat for a variety of birds including woodpeckers and warblers. In addition, there are excellent butterfly viewing opportunities. Below are some tips for consideration in order to properly manage risk and to protect the resources of Shetland Conservation Area:

- Take only photographs. Enjoy public woodlands, but when you leave, take only memories with you.
- Do not dig up plants. It disturbs the soil and promotes weedy species to move in and deplete the plant community.
- Leave only footprints. Avoid littering.
- Indiscriminate access and new trail blazing in any natural area results in vegetation trampling, loss of wildlife habitat, declining health of existing vegetation and increased risk of soil erosion.
- Do not feed the animals. Watch and enjoy, however, resist the urge to feed wild animals, ducks and geese.
- Control all pets and keep dogs and cats under control. Free ranging pets can kill or disturb wildlife. A free roaming cat can kill large numbers of birds, is prone to injury outdoors and is more likely to bring fleas back into the house.

7.2 Insects:

Insects such as the mosquito can potentially carry the West Nile Virus which is a mosquito born illness that usually has little effect on humans however in rare cases can cause serious health issues and may lead to encephalitis, or swelling of the brain. Those with extremely weakened immune systems such as the very young and elderly are the most susceptible to this virus. Another insect that is of concern is ticks. Some ticks can carry *borrelia burgdorferi* which is the bacteria that causes Lyme disease. Early symptoms of this tick born disease can include fever, headache, fatigue, and depression. A circular skin rash called erythema migrans may also develop. Left untreated, later symptoms may involve the joints, heart, and even the central nervous system.

8.0 Master Plan Concept

The master plan concept for the Shetland Conservation Area is a multi-point plan comprised of several recommendations outlined below. These recommendations seek to enhance the Shetland Conservation Area and increase visitors to Conservation Area.

8.1 Recommendations:

1. Formally Recognize the Natural Areas in the Shetland Conservation Area

Rationale:

St. Clair Region Conservation Authority recognizes that a natural zone exists within the Shetland Conservation Area. This natural zone comprises woodlots located along the west side of the south part of the area and on the north side of the river. It is important for the conservation area that this area remains naturalized and undisturbed. Wildlife can thrive within naturalized areas, and for the continued success of Shetland Conservation area, The Township of Dawn-Euphemia needs to formally recognize this area of naturalized land and ensure its remains undisturbed. This can be accomplished by avoiding development activities in these areas as well as installing interpretive signs that indicate that extent of these areas and their significance. Please see Map 1 to view where these naturalized areas are located.

2. Installation of Informational/Interpretive Plaques

Rationale:

This recommendation seeks to improve the educational value of the Shetland Conservation Area. By installing topical education/interpretive plaques throughout the conservation area, visitors will have the opportunity to learn about the numerous plant, and wildlife species, especially those that are rare or at risk. The more visitors can learn about the environment, the greater an appreciation can be developed for the conservation area and the Sydenham River watershed as a whole. The plaques can be made from a high pressure laminate named folia. Please refer to the Map 1 for proposed locations.

3. Improve Tree Management

Rationale:

A system of tree management needs to be enacted which ensures that the tree population within the Shetland Conservation Area continues to remain healthy. For

example a number of ash trees are infected with the emerald ash borer. As these ash trees die, a system of replacement needs to be in place to ensure that new plantings are initiated. Cost sharing partnerships with the St. Clair Region Conservation Authority, local and area community groups such as the Boy Scouts, environmental organizations and educational institutions can be explored in order to share the costs of planting new trees when they are needed.

4. Expand the Number of Serviced Campsites and Access Road

Rationale:

The Shetland Conservation Area presently offers sixteen serviced (water and hydro) and fifteen un-serviced campsites. The Township of Dawn-Euphemia is responsible for developing and administering the campsites in the Conservation Area. In 2013 and 2014 all of the serviced campsites have been booked by seasonal campers. It is desirable that consideration be given to increasing the number of serviced campsites on a phased basis. Initially five additional sites could be serviced. As demand for serviced campsites increases, additional un-serviced campsites can be serviced. This would help attract additional seasonal campers and camping enthusiasts and therefore, bring more people to the Conservation Area.

To provide proper access to the proposed new serviced lots, it is desirable that an internal gravel access laneway be installed as shown on Map 1.

5. Install Permanent Washroom Facilities

Rationale:

One of the major weaknesses associated with the Shetland Conservation Area is the lack of a permanent washroom facility. The current washrooms consist of a few portable toilets that are rented on an annual basis. In order to better accommodate all visitors, and campers a new facility is needed. The washroom facilities should be designed to be accessible to persons with disabilities. There should also be appropriate lighting installed to provide safe access to the washrooms after dark. Finally the facility needs to be constructed outside the flood plain south of the existing camping area where there is sufficient area to build the facility including a dumping station. A proposed location is shown on Map 1.

6. Maintain Boat Docks

Rationale:

In the past there were two sets of boat docks located in the Shetland Conservation Area. One was located on the north side of the Sydenham River while the second one is located on the south side of the river. In 2014 the boat dock located on the north side of the river became detached and was washed away. The dock has not been located. It is desirable that this dock be replaced and seawall improvements undertaken as well as appropriate signage for the dock be installed. Boats (canoes, kayaks etc.) can access these docks. Regular maintenance of the docks should be carried out to ensure that the docks remain safe and structurally sound. The recommendation to replace the north dock and install signage for the dock has an immediate financial implication. Improvements to the docks should be made, as they are needed.

7. Renovate Canteen

Rationale:

There is a canteen located on the grounds. Over time the condition of the building has become poor at best. A new roof was installed in 2013 which will help ensure the future integrity of the building. The canteen also requires that some of the panels be replaced and the building repainted. A functional canteen is important amenity to offer and has benefits that all can enjoy during special events such as the annual St. Clair Region Conservation Authority Canoe Race.

8. Install New Playground Equipment and Horseshoe Pits

Rationale:

There is a limited amount of playground equipment (slide and climber) available for use at the Shetland Conservation Area. This equipment should be inspected for conformity to present safety standards and be accessible for persons with disabilities. For the purposes of this plan, enhanced playground equipment (swings and a creative play unit) should be installed, for the enjoyment of children visiting and camping at the Shetland Conservation Area. Consideration should also be given to the installation of a safe base under all playground equipment such as mulch or pea stone gravel. The location of the new playground is indicated on Map 1.

During the summer months there are several seasonal campers that use the park. It is desirable to develop one or two horseshoe pits in the park for the use of park users.

9. Improve Promotion and Marketing of the Shetland Conservation Area

While the Shetland Conservation Area does host special events such as the St. Region Conservation Authority annual canoe race, more needs to be done to promote the conservation area. For example, the Township's website can be utilized to help achieve this recommendation. In addition, the design and circulation of informational pamphlets and brochures can be considered to promote the Shetland Conservation Area to local and area residents as a place where visitors can come and enjoy the outdoors and appreciate nature.

9.0 Infrastructure Cost Estimates

The following cost estimates are provided for the recommended infrastructure improvements and renovations at the Shetland Conservation Area.

Interpretive Signs:	\$3,325 for seven interpretive signs
Campsite Conversion:	\$1,000 per site
Washroom facilities:	\$50,000 – 75,000 (including waste station)
New panels on Canteen:	\$1,000
New Playground Equipment:	\$25,000
Replacement dock, seawall	\$15,000
Improvements and signage	
Horseshoe pits (2)	\$1,000

10.0 Implementation (Phasing) Plan

The recommendations are to be implemented over a five to six year time frame. This would provide enough flexibility for proper budgeting. The recommended projects are broken down into immediate, short and intermediate term initiatives as follows:

Immediate Initiatives: within six months to one year of adoption

- Establish a tree management system
- Improve marketing and promotion for Shetland Conservation Area
- Formally recognize the natural areas of Shetland
- Maintain boat docks
- Renovate canteen
- Develop Horseshoe pits

Short term Initiatives: within one to two years of adoption

- Install new playground equipment with safety surfacing
- Build permanent washroom facilities
- Undertake seawall improvements and replace north dock

Intermediate Initiatives: within three to four years of adoption

- Install interpretive signage
- Convert un-serviced campsites into serviced sites

11.0 Potential Funding Sources

The Township will seek out applicable Provincial, Federal and private sector funding programs to assist in implementing the projects identified in this Master Plan. The St. Clair Region Conservation Authority will also be approached for funding assistance. Funding should also be appropriated by Township Council through future current and capital budgets.

12.0 Conclusions

The Shetland Conservation Area is an area of great potential for the Township of Dawn-Euphemia. This master plan offers recommendations for a number of improvements to the Shetland Conservation Area that range from improving existing infrastructure to installing educational/interpretive plaques. In addition, by enhancing promotional/marketing efforts through the Dawn-Euphemia website and the release of promotional brochures and flyers the Township will be able to encourage greater use of the Shetland Conservation Area which in turn will give residents and visitors a better appreciation of the value of the local natural environment. As the demographic profile of Dawn-Euphemia continues to age, demand for low impact passive recreational activities will increase thus making the Shetland Conservation Area an even more important asset to the Township.

The Administrator-Clerk should review this Plan annually with Council in November/December.

